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April 5, 2007

EPO - Munich 73 1 0. April 2007

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Dear Sirs,

Re: European Patent Application No. 98901249.7-1527 TIME BASE PTY. LIMITED

Document 36

I refer to the Communication pursuant to Article 96(2) EPC dated January 25, 2007, to which I would respond as follows.

I enclose a replacement set of claims and I request that further examination of the Application be based on these claims. I also enclose a copy of the replacement set of claims with the amendments indicated thereon by way of underlining to show additional text and deletions being shown by being struck through.

A revised Summary section, marked "A'", to be inserted in place of the revised Summary marked "A", filed on September 19, 2005, is also enclosed.

Dealing with the matters raised in the Communication dated January 25, 2007, in turn, I have the following comments.

#### 1. Formalities

1.1 The Examiner has objected to claims 1-20 because the features of the system claims are not defined in terms of apparatus features. In fact, only claims 1-19 are directed to a system. It is submitted that the proposed amendments to claim 1 should fully alleviate the Examiner's concerns.

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1.2 The objection with respect to claim 8 has been maintained. Specifically, the Examiner has alleged that claim 8 is vague, broad and not readily understood by a person skilled in the art. As discussed below, the Applicant disagrees with the Examiner's allegation because the Applicant believes that the Examiner has misunderstood the term linking means as defined in the specification.

The Examiner states that "the concepts of a hyperlink "comprising" information as well as of "any piece of information" are extremely vague and broad and would not be readily understood by the person skilled in the art". This characterization of claim 8 is inaccurate. Claim 8 actually recites a linking means that comprises any piece of information additional to the body of the text-based data.

"Linking means" as used in the present Application is NOT synonymous with a "hyperlink". Specifically, "linking means" includes any means by which links between portions of data can be implemented, in combination with one or more other pieces of data or interpreted in a particular context or on the happening of some event. Therefore, "linking means" are used to implement links (an exemplary type of link may include a hyperlink). For example, "linking means" may include a single attribute of a predefined portion, such as a "date" attribute, which is not a hyperlink according to any linking scheme known from the prior art. This piece of data, in combination with one or more other pieces of data or interpreted in a particular context or on the happening of some event, may allow for the creation of a hyperlink. The originally filed specification (see, for example, page 13, line 38 to page 14, line 28) provides an example of how this may be performed in the present invention.

"Linking means" further differ from conventional hyperlinks since "linking means" may also perform other functions, such as facilitating processing of the data that is beyond that envisaged by links in any known hypertext system. An example of such processing would be the automatic consolidation of amendments to legislation (see for example, Figure 6 at 616 and 618; page 8, lines 34–36; and Appendix E, page 88, lines 6–10 of the originally filed application).

# 2. Prior Art Rejections

2.3 The Examiner alleges that claim 1 lacks inventive step over the combination of references D2 and D4. Specifically, the Examiner has alleged that D2 discloses all of the features of claim 1 except encoding each predefined portion of said text-based data and said at least one modified predefined portion of text-based data with at least one linking means. The Applicant disagrees with the

Examiner's rejections because D2 does not teach the features of claim 1 and because D4 does not remedy any of the deficiencies of D2.

# 2.3.1) A plurality of predefined portions

Claim 1 recites, in part, a plurality of predefined portions of text-based data with each predefined portion being stored. In general, documents may be regarded as comprising a plurality of portions, (i.e., the various components of each document's hierarchy). However, as regards each of the references cited by the Examiner in D2, it is the Applicant's opinion that there is no teaching or suggestion therein of a plurality of <u>predefined</u> portions.

The present Application (see, for example, page 7, lines 23–29) states that an aspect of the invention is determining the "optimum storage unit". This refers to the extent to which the contents of a document are duplicated each time a new version is required. The passage, discussing prior art methods, contrasts two alternative approaches, one where an entire document is duplicated, and another in which there is no duplication and instead individual words or phrases are marked as having been inserted or deleted.

Similarly, at page 9 lines 34-39, the Application refers to the division of the information into suitably-sized portions — "suitability" being determined by reference to, among other things, knowledge of how the information is used. The portions determined through this analysis are referred to as "predefined portions". As disclosed in the description and claims, predefining portions of text of a suitable size or at a particular level in a document's hierarchy affects the method in which that text is processed in accordance with the invention.

The Application specifically discusses the case of legislation in which the predefined portion is preferably the section, schedule or provision level (see, for example, page 11 lines 36–39).

D2 does NOT disclose predefined portions of a particular size or at a particular level, either in the passages cited by the Examiner or elsewhere. For example, at page 17, in the right-hand column last paragraph, D2 discusses the need to search and retrieve (not store and manage) documents at various levels, ranging from whole documents to various subdivisions of different types of documents. Nowhere in that paragraph is it suggested that, for any given document or type of document, a specific level in the document hierarchy should be predefined for the purposes of data storage and management. On the contrary, it would be understood by a person of ordinary skill in the art that the D2 authors envisaged a system in which document search and retrieval would be possible at arbitrary

subdivisions of documents (that is, any level of document hierarchy), rather than at the level of a predefined subdivision.

# 2.3.2) Storing a predefined portion

The Application specifically describes two preferred methods of storing predefined portions of text-based data, namely either: within text files in the file system (page 11 lines 7–11 and Appendix D), or as a single column in a relational database (RDBMS) table (page 18 line 36 to page 19 line 1).

The Examiner alleges that D2 clearly provides for storage of the document portions, supplemented by a representation in the ELF data model for facilitating document retrieval...".

However, in D2, the database is a single table, being nothing more than a list of elements, for each of which some or all of the specified "features" will be stored in the columns of that table, while the documents themselves would be stored externally to that system, for example, either as whole documents or as atomic elements (page 24 right-hand column lines 7–8).

In contrast, the present Application discusses those storage options and rejects them as being incapable of solving the problems which the system in the present Application is designed to solve (see, for example, page 2, line 40 to page 4, line 23). The Application specifically describes a method of storage of the portions of text-based data, that is either within text files in the file system or as a single column in a relational database table. Furthermore, it specifically provides for the storage of portions as portions (a portion having been predefined for efficiency and optimal user functionality). In fact, the Application is principally concerned with the means of storage of the portions of text and with predefining portions as a means of determining the optimum storage unit. D2 does NOT disclose a plurality of predefined portions with each being stored since D2 merely discloses storing a list of elements and the document.

# 2.3.3) Linking means

As discussed above, "linking means of a markup language" is NOT synonymous with a "hyperlink". D2 merely discloses links which conform to the typical SGML hyperlinks. For example, at page 20 right-hand column, lines 46–47 (as cited by the Examiner in C1 at 2.1 paragraph c), D2 discusses the need for absolute identifiers ("EIDs") to support static links, whereas the present invention as described in the Application uses means that do not involve absolute identifiers or static links.

### 2.3.4) Modification of a predefined portion

The Examiner characterises the modification of documents in document retrieval systems as a trivial operation and indeed, the Application refers to a number of previously known alternative approaches for storing different versions of modified documents which may accurately be characterized as trivial. For example, from page 2, line 42 to page 4, line 18, the Application contrasts, on the one hand, systems in which an entire document is duplicated in order to incorporate one or more changes that occur at a particular point in time and, on the other hand, systems in which there is no duplication, but rather words or phrases are marked as inserted or deleted, in a method similar to "red-lining" (see also page 7, lines 25–27). The first of these approaches is one of the two possible methods of document versioning envisaged by D2 (see below).

The second possible method envisaged by D2 is whenever some text was modified, only the smallest possible unit of information was duplicated. This unit, sometimes referred to as a "leaf node" or "atomic element", would either be a single element at the lowest level of the document hierarchy (that is, an element containing no child elements) or a primitive content token (a string of text containing no embedded elements or other structural markup components, for example, #PCDATA, CDATA or RCDATA).

At, for example, page 7 lines 23–29, the Application describes the determination of the optimum storage unit (a "predefined portion"), which in turn determines the extent to which the contents of a document are duplicated each time some text is modified and a new version is required. Whenever the content or attributes of a predefined portion are changed in any way, the predefined portion is duplicated and the changes applied to the duplicate copy (see, for example, page 9, lines 13–15). In the case of legislation, the Application states that sections that have been amended are not discarded and replaced with the current provision, rather each version of the section is retained (see, for example, page 9, lines 28–30). The advantages of this approach are described by the Application (including, for example, at page 9, line 30 to page 10, line 20, page 11, line 39 to page 12, line 22).

D2 at page 20 right-hand column last paragraph refers to versioning hypertext. In the passage cited by the Examiner, D2 does not describe or refer to any particular method of storing information about actual modifications to the text or of storing the information necessary to allow retrieval of documents existing in a plurality of different versions. Specifically, D2 does not describe or refer

to the extent, if any, to which the contents of a document are duplicated whenever some text is modified necessitating a new version.

The absence of such detail in D2 stems from the fact that, as noted above, D2 leaves to the implementer the choice of storing whole documents or reconstructing them from atomic elements (page 24 right-hand column lines 6–11). Insofar as D2 suggests any alternative to storing whole documents as discrete versions, it is clear from the description of the data model (page 20 right-hand column lines 27–29 and 33–34) that D2 merely suggests a system where versioning involves the duplication of elements or primitive content tokens at the lowest level of the document hierarchy, rather than at any predefined level.

For these reasons, and for the reasons outlined above with respect to storage of a plurality of predefined portions, D2 fails to disclose modification and storage of at least one predefined portion of text.

2.3.5) Each attribute being a point on an axis of a multidimensional space for organising said plurality of predefined portions and said at least one modified predefined portion of text-based data.

The Examiner alleges that this aspect of claim 1 cannot be considered a technical feature as the attributes of any database may be seen as spanning up a multidimensional space indexing the database records. The Applicant respectfully disagrees.

The attributes of a predefined portion of text-based data (such as the first and last dates on which a legislative provision is in force, references to relevant amending legislation, cases and related materials) are an exemplary means by which the invention described in the Application organises the portions of text to allow users to retrieve related portions or navigate along meaningful pathways between portions.

The present Application (at, for example, page 1, line 15) recognises that publishers of large diverse collections of structured documents, such as legal information, would benefit from the multidimensional possibilities of their collections. As further indicated at, for example, page 7 lines 30–40, structured markup languages such as SGML and XML are a necessary but not sufficient means of encoding such document collections so as to exploit the multidimensional capabilities of those collections.

Prior methods for storing and managing such structured documents either attempted to map or represent all the structural and other information contained

in the markup, theoretically defining the multidimensional space (eg, objectoriented databases and some native-SGML databases), or avoided the issue altogether (eg, other native-SGML databases, some document management systems, D2).

A relational database provides a fast, efficient, cost-effective and scalable way of implementing a multidimensional space, where the dimensions are known at the time the database is designed.

In the Application however, potentially meaningful relationships between different portions of data are identified in advance of implementation, as part of the data analysis process. Using relational database technology, in a manner not known from the prior art, allows the invention to provide a potentially large but nevertheless fixed number of possible dimensions for navigation among the data portions, with each such dimension being as easily accessed as any other.

By contrast, where every element or leaf node is an object and there is a separate table for every one of the potentially thousands of different element types, with separate fields for every one of the potentially thousands of different attribute types associated therewith, the concept of a multidimensional space, is not possible.

While D2 is implemented in part using a relational database, it does not describe a system in which the portions of data are organised according to the attributes into a multidimensional space, because the attributes of the portions of data themselves (*ie*, the SGML attributes) have been deliberately left out of the D2 database schema. Inclusion of some or all of the SGML attributes in the ELF data model would have been inconsistent with the D2 authors' stated objectives of relying solely on a document's DTD for a schema and of supporting access without join operations (page 20 right-hand column lines 19–22). Moreover the so-called "features" of the ELF data model, at most, describe a two-dimensional space.

In common with other previously known SGML-based systems, D2 does disclose a plurality of attributes, but D2 does not disclose a plurality of attributes, each attribute being a point on an axis of a multidimensional space for organising said plurality of predefined portions and said at least one modified predefined portion of text-based data.

The use of attributes of portions of text (including modified portions of text) to organise those portions into a multidimensional space for the purpose of

publishing the text electronically is not disclosed by the prior art. It is not obvious and it does involve an inventive step.

2.3.6) "each predefined portion of said text-based data and said at least one modified predefined portion of text-based data being encoded with at least one linking means"

The Examiner alleges that "the problem to be solved may be regarded as facilitating the retrieval of different versions of a document portion". The Applicant respectfully disagrees. For the reasons stated above, the present invention is not merely concerned with document retrieval. It encompasses the storage and management of portions of text-based data in such a way that types of processing other than retrieval are also facilitated, for example, automated application of amendments to the text of legislation.

Furthermore, the present invention is not just concerned with different versions of a document portion. The multidimensional space used in the invention as a means of organising portions of data enables dealing with different portions of data that are related in multiple ways, not just as different versions of the same portion. For example, sections of legislation can be connected with cases which interpret them (see, for example, page 7, lines 15–20; page 13, line 9 to page 14, line 24; and Figures 4 and 17).

After citing a reference to document versioning in D2, the Examiner says, 'The skilled person starting at D2 and trying to solve this problem would turn to document D4 ... in which it is disclosed to store different versions of a document portion in parallel, and to associate them by "anchors" as linking means.'

However, D4 (at page 9 lines 4–5) describes documents as "virtual lists of references (called anchors) either to other documents or directly to the file system". At page 10 line 9, D4 states in reference to anchors of a particular kind, "others will be references to the previous version of the document". This describes a system in which documents are "skeletons", consisting of a list of references to portions of data stored elsewhere (page 9, lines 5–8 and 16–18). This can be distinguished from claim 1 of the present Application, in which documents contain all the text of every version of every portion comprising the document.

D4 uses a links table or a separate document to store dynamic and static links between portions of data, that table or document being external to the portions of data (see page 4 first paragraph, section 2.3 page 6, page 10 lines 15–16 and

Figures 1, 2 and 3). For this reason, D4 does not disclose linking means of a markup language.

D4 also describes a system in which versioning of text-based data is implemented using a technique that the authors call "delta versioning" (see section 2.3 page 9). In systems using this technique, only one single complete version of a document is stored (either the earliest or the most recent) and external to or outside the boundaries of that document there is stored a list of instructions, in chronological order, for changing that version to produce each successive (or preceding) different version.

Additionally, D4 fails to disclose predefined portions of text-based data. In view of the delta versioning method described above, D4 also fails to disclose at least one predefined portion being modified and stored. For these reasons, D4 does not disclose each predefined portion of said text-based data and said at least one modified predefined portion of text-based data being encoded with at least one linking means.

- 2.4 The above arguments apply to claims 20 and 40 since claims 20 and 40 recite features that are similar to the features of claim 1, discussed above.
- 2.5 The above arguments apply to claims 2-19, 21-39, and 41-58 since these claims are dependent upon claims 1, 20, and 40.

It is submitted that the Application is now in order for allowance. However, if the Examiner does not share this view and intends to refuse the Application, then oral proceedings are again respectfully requested. However, in the latter regard, it will be appreciated that the Applicant has made every effort to overcome the objections raised and thus if there are any outstanding matters, I take the view that it would be reasonable to issue a further Communication under Article 96(2) EPC.

Yours faithfully,

John Ryan -

Professional Representative



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<sup>2</sup> Amended set of claims (clean)	
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#### **CLAIMS:**

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- A computer-implemented system for publishing an electronic publication using text-based data, said computer-implemented system characterised by:
- a plurality of predefined portions of text-based data with each predefined portion being stored,

a plurality of linking means of a markup language; means for modifying and storing at least one predefined portion, means for encoding each predefined portion of said text-based data and said at least one modified predefined portion of text-based data with at least one linking means; and

means for organising said plurality of predefined portions and said at least one modified predefined portion of said text-based data using a plurality of attributes (s1, s2, s3, s4, L, C, J), each attribute being a point on an axis of a multidimensional space (100).

- The system according to claim 1, further characterised by 2. means for searching within the system.
- The system according to claim 2, characterised in that said 3. searching means uses one or more attributes.
- The system according to either one of claims 2 or 3, characterised in that said searching means uses any predefined portion, 25 any modification of a predefined portion, or any word or phrase within such predefined portion or such modification.
- 5. The system according to claim 1, further characterised by means for searching at least one of said text-based predefined portions of 30 said data using said plurality of attributes, wherein said plurality of attributes are coupled to each of said predefined portions by said respective linking means, and for retrieving one or more of said predefined portions using said plurality of attributes to define a point in said multidimensional space. 35
  - The system according to any one of claims 1 to 3 and 5, 6. characterised in that said markup language is Standard Generalised Markup Language (SGML) or eXtensible Markup Language (XML).

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- 7. The system according to claim 6, characterised in that said text-based data is encoded using one or more Document Type Definitions (DTD) (610) or Style Sheet Mechanisms (SSM).
- The system according to any one of claims 1 to 3 and 5, 8. characterised in that said linking means comprises any piece of information additional to the body of the text-based data.
- 10 9. The system according to claim 8, characterised in that said linking means is a code or markup that allows departure and destination points to be created between portions of said text-based data.
- The system according to any one of claims 1 to 3 and 5, 10. characterised in that said at least one linking means comprises an 15 identification code for said respective predefined portion.
  - 11. The system according to any one of claims 1 to 3 and 5, characterised in that a first database comprises said plurality of predefined portions of text-based data.
  - The system according to claim 11, characterised in that a second database comprises said plurality of attributes for managing said first database.
  - The system according to any one of claims 1 to 3 and 5, characterised in that said predefined portions are encoded with one or more attributes.
- The system according to any one of claims 1 to 3 and 5, 30 characterised in that said respective predefined portion is changed by performing one of the group consisting of adding at least one attribute to said respective predefined portion, deleting at least one attribute from said respective predefined portion, and modifying at least one of the attributes of said respective predefined portion. 35
  - 15. The system according to any one of claims 1 to 3 and 5, characterised in that said respective predefined portion is changed by performing one of the group consisting of adding data to said respective

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predefined portion, deleting data from said respective predefined portion, and modifying data of said respective predefined portion.

- The system according to any one of claims 1 to 3 and 5. characterised in that said text-based data comprises legislation. 5
  - The system according to claim 16, characterised in that each 17. of said plurality of predefined portions of said text-based data is a respective provision of said legislation.
  - The system according to claim 17, characterised in that said provision is a section or schedule of an Act, or a regulation or schedule of a Regulation(s).
- The system according to any one of claims 1 to 3 and 5, 15 characterised in that each predefined portion is a block of said text-based data, said block being larger than a single word and less than an entire document of said text-based data.
- 20 A computer readable recording medium for publishing an electronic publication using text-based data, said computer readable recording medium characterised by:
  - a plurality of predefined portions of text-based data with each predefined portion being stored,
  - a plurality of linking means of a markup language; means for modifying and storing at least one predefined portion, means for encoding each predefined portion of said text-based data and said at least one modified predefined portion of text-based data with at least one linking means; and
  - means for organising said plurality of predefined portions and said at least one modified predefined portion of said text-based data using a plurality of attributes (s1, s2, s3, s4, L, C, J), each attribute being a point on an axis of a multidimensional space (100).
  - The recording medium according to claim 20, characterised in that means for searching can be used to search the recording medium.
    - 22. The recording medium according to claim 21, characterised in that said searching means uses one or more attributes.

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- 23. The recording medium according to claim 21 or 22, characterised in that said searching means uses any predefined portion, any modification of a predefined portion, or any word or phrase within such predefined portion or such modification.
- The recording medium according to claim 20, further 24. characterised by means for searching at least one of said predefined portions of said text-based data uses said plurality of attributes, wherein said plurality of attributes are coupled to each of said predefined portions by said respective linking means, and for retrieving one or more of said predefined portions using said plurality of attributes to define a point in said multidimensional space.
- 25. The recording medium according to any one of claims 20 to 15 22 and 24, characterised in that said markup language is Standard Generalised Markup Language (SGML) or eXtensible Markup Language (XML).
- The recording medium according to claim 25, characterised 20 26. in that said text-based data is encoded using one or more Document Type Definitions (DTD) (610) or Style Sheet Mechanisms (SSM).
- The recording medium according to any one of claims 20 to 22 and 24, characterised in that said linking means comprises any piece 25 of information additional to the body of the text-based data.
- The recording medium according to claim 27, characterised in that said linking means is a code or markup that allows departure and destination points to be created between portions of said text-based data. 30
  - The recording medium according to any one of claims 20 to 22 and 24, characterised in that said at least one linking means comprises an identification code for said respective predefined portion.
  - The recording medium according to any one of claims 20 to 22 and 24, characterised in that a first database comprises said plurality of predefined portions of said text-based data.

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- The recording medium according to claim 30, characterised 31. in that a second database comprises said plurality of attributes for managing said first database.
- The recording medium according to any one of claims 20 to 5 22 and 24, characterised in that said predefined portions are encoded with one or more attributes.
- The recording medium according to any one of claims 20 to 22 and 24, characterised in that said respective predefined portion is 10 changed by performing one of the group consisting of adding at least one attribute to said respective predefined portion, deleting at least one attribute from said respective predefined portion, and modifying at least one of the attributes of said respective predefined portion.
  - The recording medium according to any one of claims 20 to 22 and 24, characterised in that said respective predefined portion is changed by performing one of the group consisting of adding data to said respective predefined portion, deleting data from said respective predefined portion, and modifying data of said respective predefined portion.
- The recording medium according to any one of claims 20 to 22 and 24, characterised in that said text-based data comprises legislation. 25
  - The recording medium according to claim 35, characterised 36. in that each of said plurality of predefined portions of said text-based data is a respective provision of said legislation.
  - The recording medium according to claim 36, characterised in that said provision is a section or schedule of an Act, or a regulation or schedule of a Regulation(s).
- The recording medium according to any one of claims 20 to 35 22 and 24, characterised in that said recording medium is made from one of the group consisting of magnetic media, optical media, and magnetooptical media.

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- The recording medium according to any one of claims 20 to 22 and 24, characterised in that each predefined portion is a block of said text-based data, said block being larger than a single word and less than an entire document of said text-based data.
- A computer-implemented method for publishing an electronic publication using text-based data, said method characterised by the steps of:

providing a plurality of predefined portions of text-based data with each predefined portion being stored,

providing a plurality of linking means of a markup language; providing at least one predefined portion being modified and stored;

encoding each predefined portion of said text-based data and said at least one modified predefined portion with at least one of said linking means; and

providing a plurality of attributes (s1, s2, s3, s4, L, C, J), each attribute being a point on an axis of a multidimensional space (100) for organising said plurality of predefined portions and said at least one modified predefined portion of said text-based data.

- The method according to claim 40, further characterised by 41. the step of searching said text-based data.
- The method according to claim 41, characterised in that said 25 42. searching step uses one or more attributes.
  - The method according to either one of claims 41 or 42, 43. characterised in that said searching step uses any predefined portion, any modification of a predefined portion, or any word or phrase within such predefined portion or such modification.
- The method according to claim 40, further characterised by the step of searching at least one of said predefined portions of said textbased data using said plurality of attributes, wherein said plurality of 35 attributes are coupled to each of said predefined portions by said respective linking means, and for retrieving one or more of said predefined portions using said plurality of attributes to define a point in said multidimensional space.

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- 45. The method according to any one of claims 40 to 42 and 44, characterised in that said markup language is Standard Generalised Markup Language (SGML) or eXtensible Markup Language (XML).
- The method according to claim 45, characterised in that said 46. text-based data is encoded using one or more Document Type Definitions (DTD) (610) or Style Sheet Mechanisms (SSM).
- 47. The method according to any one of claims 40 to 42 and 44, 10 characterised in that said linking means comprises any piece of information additional to the body of the text-based data.
- 48. The method according to claim 47, characterised in that said linking means is a code or markup that allows departure and destination 15 points to be created between portions of said text-based data.
  - The method according to any one of claims 40 to 42 and 44, 49. characterised in that said at least one linking means comprises an identification code for said respective predefined portion.
  - 50. The method according to any one of claims 40 to 42 and 44, characterised in that a first database comprises said plurality of predefined portions of said text-based data.
  - The method according to claim 50, characterised in that a 51. second database comprises said plurality of attributes for managing said first database.
- The method according to any one of claims 40 to 42 and 44, 30 52. characterised in that said predefined portions are encoded with one or more attributes.
- The method according to any one of claims 40 to 42 and 44, 53. characterised in that said respective predefined portion is changed by 35 performing one of the group consisting of adding at least one attribute to said respective predefined portion, deleting at least one attribute from said respective predefined portion, and modifying at least one of the attributes of said respective predefined portion.

- The method according to any one of claims 40 to 42 and 44, 54. characterised in that said respective predefined portion is changed by performing one of the group consisting of adding data to said respective predefined portion, deleting data from said respective predefined portion, and modifying data of said respective predefined portion.
- The method according to any one of claims 40 to 42 and 44, characterised in that said text-based data comprises legislation.
- The method according to claim 55, characterised in that 56. each of said plurality of predefined portions of text-based data is a respective provision of said legislation.
- The method according to claim 56, characterised in that said 15 57. provision is a section or schedule of an Act, or a regulation or schedule of a Regulation(s).
- The method according to any one of claims 40 to 42 and 44, 58. characterised in that each predefined portion is a block of said text-based 20 data, said block being larger than a single word and less than an entire document of said text-based data.

### CLAIMS:

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(Currently Amended) A computer-implemented system for 1. publishing an electronic publication using text-based data, said computer-implemented system characterised by:

eomprising a plurality of predefined portions of text-based data with each predefined portion being stored, and

a plurality of linking means of a markup language; said computerimplemented system characterised by:

means for modifying and storing at least one predefined portion being modified and stored,

means for encoding each predefined portion of said text-based data and said at least one modified predefined portion of text-based data being encoded with at least one linking means; and

means for organising said plurality of predefined portions and said at least one modified predefined portion of said text-based data using a plurality of attributes (s1, s2, s3, s4, L, C, J), each attribute being a point on an axis of a multidimensional space (100) for organising said plurality of predefined portions and said at least one modified predefined portion of said text-based data.

- (Original) The system according to claim 1, further characterised by means for searching within the system.
- (Original) The system according to claim 2, characterised in 25 that said searching means uses one or more attributes.
  - (Original) The system according to either one of claims 2 or 3, characterised in that said searching means uses any predefined portion, any modification of a predefined portion, or any word or phrase within such predefined portion or such modification.
- (Original) The system according to claim 1, further characterised by means for searching at least one of said text-based predefined portions of said data using said plurality of attributes, wherein 35 said plurality of attributes are coupled to each of said predefined portions by said respective linking means, and for retrieving one or more of said predefined portions using said plurality of attributes to define a point in said multidimensional space.

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- 6. (Original) The system according to any one of claims 1 to 3 and 5, characterised in that said markup language is Standard Generalised Markup Language (SGML) or eXtensible Markup Language (XML).
- (Original) The system according to claim 6, characterised in 7. that said text-based data is encoded using one or more Document Type Definitions (DTD) (610) or Style Sheet Mechanisms (SSM).
- 8. (Original) The system according to any one of claims 1 to 3 and 5, characterised in that said linking means comprises any piece of information additional to the body of the text-based data.
- 15 9. (Original) The system according to claim 8, characterised in that said linking means is a code or markup that allows departure and destination points to be created between portions of said text-based data.
- 10. (Original) The system according to any one of claims 1 to 3 and 5, characterised in that said at least one linking means comprises an 20 identification code for said respective predefined portion.
  - (Original) The system according to any one of claims 1 to 3 11. and 5, characterised in that a first database comprises said plurality of predefined portions of text-based data.
    - (Original) The system according to claim 11, characterised 12. in that a second database comprises said plurality of attributes for managing said first database.
    - (Original) The system according to any one of claims 1 to 3 and 5, characterised in that said predefined portions are encoded with one or more attributes.
- (Original) The system according to any one of claims 1 to 3 35 and 5, characterised in that said respective predefined portion is changed by performing one of the group consisting of adding at least one attribute to said respective predefined portion, deleting at least one attribute from

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said respective predefined portion, and modifying at least one of the attributes of said respective predefined portion.

- (Original) The system according to any one of claims 1 to 3 and 5, characterised in that said respective predefined portion is changed by performing one of the group consisting of adding data to said respective predefined portion, deleting data from said respective predefined portion, and modifying data of said respective predefined portion.
  - (Original) The system according to any one of claims 1 to 3 16. and 5, characterised in that said text-based data comprises legislation.
- 17. (Original) The system according to claim 16, characterised in that each of said plurality of predefined portions of said text-based 15 data is a respective provision of said legislation.
  - (Original) The system according to claim 17, characterised 18. in that said provision is a section or schedule of an Act, or a regulation or schedule of a Regulation(s).
  - 19. (Original) The system according to any one of claims 1 to 3 and 5, characterised in that each predefined portion is a block of said text-based data, said block being larger than a single word and less than an entire document of said text-based data.
  - (Currently Amended) A computer readable recording 20. medium for publishing an electronic publication using text-based data, said computer readable recording medium characterised by:

comprising a plurality of predefined portions of text-based data with each predefined portion being stored, and

a plurality of linking means of a markup language; said computer readable recording medium characterised by:

means for modifying and storing at least one predefined portion being modified and stored,

means for encoding each predefined portion of said text-based data and said at least one modified predefined portion of text-based data being encoded with at least one linking means; and

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means for organising said plurality of predefined portions and said at least one modified predefined portion of said text-based data using a plurality of attributes (s1, s2, s3, s4, L, C, J), each attribute being a point on an axis of a multidimensional space (100) for organising said plurality of predefined portions and said at least one modified predefined portion of said text-based data.

- 21. (Original) The recording medium according to claim 20, characterised in that means for searching can be used to search the recording medium.
- (Original) The recording medium according to claim 21, 22. characterised in that said searching means uses one or more attributes.
- (Original) The recording medium according to claim 21 or 23. 15 22, characterised in that said searching means uses any predefined portion, any modification of a predefined portion, or any word or phrase within such predefined portion or such modification.
- (Original) The recording medium according to claim 20, 20 24. further characterised by means for searching at least one of said predefined portions of said text-based data uses said plurality of attributes, wherein said plurality of attributes are coupled to each of said predefined portions by said respective linking means, and for retrieving one or more of said predefined portions using said plurality of attributes 25 to define a point in said multidimensional space.
  - 25. (Original) The recording medium according to any one of claims 20 to 22 and 24, characterised in that said markup language is Standard Generalised Markup Language (SGML) or eXtensible Markup Language (XML).
  - (Original) The recording medium according to claim 25, 26. characterised in that said text-based data is encoded using one or more Document Type Definitions (DTD) (610) or Style Sheet Mechanisms (SSM).
    - (Original) The recording medium according to any one of 27. claims 20 to 22 and 24, characterised in that said linking means

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comprises any piece of information additional to the body of the textbased data.

- 28. (Original) The recording medium according to claim 27, characterised in that said linking means is a code or markup that allows departure and destination points to be created between portions of said text-based data.
- 29. (Original) The recording medium according to any one of claims 20 to 22 and 24, characterised in that said at least one linking 10 means comprises an identification code for said respective predefined portion.
- **30.** (Original) The recording medium according to any one of claims 20 to 22 and 24, characterised in that a first database comprises 15 said plurality of predefined portions of said text-based data.
  - 31. (Original) The recording medium according to claim 30, characterised in that a second database comprises said plurality of attributes for managing said first database.
  - 32. (Original) The recording medium according to any one of claims 20 to 22 and 24, characterised in that said predefined portions are encoded with one or more attributes.
  - (Original) The recording medium according to any one of 33. claims 20 to 22 and 24, characterised in that said respective predefined portion is changed by performing one of the group consisting of adding at least one attribute to said respective predefined portion, deleting at least one attribute from said respective predefined portion, and modifying at least one of the attributes of said respective predefined portion.
- (Original) The recording medium according to any one of 34. claims 20 to 22 and 24, characterised in that said respective predefined 35 portion is changed by performing one of the group consisting of adding data to said respective predefined portion, deleting data from said respective predefined portion, and modifying data of said respective predefined portion.

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- 35. (Original) The recording medium according to any one of claims 20 to 22 and 24, characterised in that said text-based data comprises legislation.
- 36. (Original) The recording medium according to claim 35, characterised in that each of said plurality of predefined portions of said text-based data is a respective provision of said legislation.
- 10 37. (Original) The recording medium according to claim 36, characterised in that said provision is a section or schedule of an Act, or a regulation or schedule of a Regulation(s).
- (Original) The recording medium according to any one of 38. claims 20 to 22 and 24, characterised in that said recording medium is 15 made from one of the group consisting of magnetic media, optical media, and magneto-optical media.
- 39. (Original) The recording medium according to any one of claims 20 to 22 and 24, characterised in that each predefined portion is a 20 block of said text-based data, said block being larger than a single word and less than an entire document of said text-based data.
- (Currently Amended) A computer-implemented method for publishing an electronic publication using text-based data, said method 25 characterised by the steps of:

comprising the steps of providing a plurality of predefined portions of text-based data with each predefined portion being stored, and

providing a plurality of linking means of a markup language; said method characterised by the steps of:

providing at least one predefined portion being modified and stored;

encoding each predefined portion of said text-based data and said at least one modified predefined portion with at least one of said linking means; and

providing a plurality of attributes (s1, s2, s3, s4, L, C, J), each attribute being a point on an axis of a multidimensional space (100) for

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organising said plurality of predefined portions and said at least one modified predefined portion of said text-based data.

- (Original) The method according to claim 40, further characterised by the step of searching said text-based data. 5
  - 42. (Original) The method according to claim 41, characterised in that said searching step uses one or more attributes.
- 10 43. (Original) The method according to either one of claims 41 or 42, characterised in that said searching step uses any predefined portion, any modification of a predefined portion, or any word or phrase within such predefined portion or such modification.
- (Original) The method according to claim 40, further 15 44. characterised by the step of searching at least one of said predefined portions of said text-based data using said plurality of attributes, wherein said plurality of attributes are coupled to each of said predefined portions by said respective linking means, and for retrieving one or more of said predefined portions using said plurality of attributes to define a 20 point in said multidimensional space.
  - 45. (Original) The method according to any one of claims 40 to 42 and 44, characterised in that said markup language is Standard Generalised Markup Language (SGML) or eXtensible Markup Language (XML).
    - (Original) The method according to claim 45, characterised in that said text-based data is encoded using one or more Document Type Definitions (DTD) (610) or Style Sheet Mechanisms (SSM).
    - (Original) The method according to any one of claims 40 to 42 and 44, characterised in that said linking means comprises any piece of information additional to the body of the text-based data.
    - (Original) The method according to claim 47, characterised in that said linking means is a code or markup that allows departure and destination points to be created between portions of said text-based data.

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- (Original) The method according to any one of claims 40 to 42 and 44, characterised in that said at least one linking means comprises an identification code for said respective predefined portion.
- 5 (Original) The method according to any one of claims 40 to 42 and 44, characterised in that a first database comprises said plurality of predefined portions of said text-based data.
- (Original) The method according to claim 50, characterised in that a second database comprises said plurality of attributes for 10 managing said first database.
  - (Original) The method according to any one of claims 40 to 42 and 44, characterised in that said predefined portions are encoded with one or more attributes.
    - (Original) The method according to any one of claims 40 to 42 and 44, characterised in that said respective predefined portion is changed by performing one of the group consisting of adding at least one attribute to said respective predefined portion, deleting at least one attribute from said respective predefined portion, and modifying at least one of the attributes of said respective predefined portion.
- (Original) The method according to any one of claims 40 to 42 and 44, characterised in that said respective predefined portion is 25 changed by performing one of the group consisting of adding data to said respective predefined portion, deleting data from said respective predefined portion, and modifying data of said respective predefined portion.
  - (Original) The method according to any one of claims 40 to 42 and 44, characterised in that said text-based data comprises legislation.
- (Original) The method according to claim 55, characterised 35 56. in that each of said plurality of predefined portions of text-based data is a respective provision of said legislation.

- (Original) The method according to claim 56, characterised in that said provision is a section or schedule of an Act, or a regulation or schedule of a Regulation(s).
- (Original) The method according to any one of claims 40 to 42 and 44, characterised in that each predefined portion is a block of said text-based data, said block being larger than a single word and less than an entire document of said text-based data.

#### "A'"

#### **SUMMARY**

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In accordance with a first aspect of the invention, there is provided a computer-implemented system for publishing an electronic publication using text-based data, said computer-implemented system characterised by:

a plurality of predefined portions of text-based data with each predefined portion being stored,

a plurality of linking means of a markup language; means for modifying and storing at least one predefined portion, means for encoding each predefined portion of said text-based data and said at least one modified predefined portion of text-based data with at least one linking means; and

means for organising said plurality of predefined portions and said at least one modified predefined portion of said text-based data using a plurality of attributes, each attribute being a point on an axis of a multidimensional space.

In accordance with a second aspect of the invention, there is provided a computer readable recording medium for publishing an electronic publication using text-based data, said computer readable recording medium characterised by:

a plurality of predefined portions of text-based data with each predefined portion being stored,

a plurality of linking means of a markup language;
means for modifying and storing at least one predefined portion,
means for encoding each predefined portion of said text-based
data and said at least one modified predefined portion of text-based data
with at least one linking means; and

means for organising said plurality of predefined portions and said at least one modified predefined portion of said text-based data using a plurality of attributes, each attribute being a point on an axis of a multidimensional space.

In accordance with a third aspect of the invention, there is provided a computer-implemented method for publishing an electronic

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publication using text-based data, said method characterised by the steps of:

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providing a plurality of predefined portions of text-based data with each predefined portion being stored,

providing a plurality of linking means of a markup language; providing at least one predefined portion being modified and stored;

encoding each predefined portion of said text-based data and said at least one modified predefined portion with at least one of said linking means; and

providing a plurality of attribute, each attribute being a point on an axis of a multidimensional space for organising said plurality of predefined portions and said at least one modified predefined portion of said text-based data.